

Developing the Next Generation of Explorers

What is NC Space Grant?

North Carolina Space Grant leads the way in developing and promoting aeronautics and space-related science, technology, engineering and math (STEM) education. Since 1991, education and outreach efforts have equipped the current and future aerospace workforce.

Our Partners

From our headquarters at NC State University in Raleigh, NC Space Grant collaborates with colleges and universities statewide, plus the community college system and many other partners, including NASA centers, industry, nonprofits, government agencies, planetariums and museums.



NC Space Education Ambassadors utilize various teaching tools such as Virtual Reality goggles to engage students in the discovery of NASA missions.

* DATA COMES FROM FISCAL YEAR 2021-22

How We Work

Since its inception. NC Space Grant has facilitated funding for millions of dollars of STEM research and public outreach efforts. Through a combination of federal, state and industry funding, we support programs that help build a diverse STEM workforce through hands-on experiential learning, team-based activities, and unique research opportunities for students and faculty. We also engage with formal and informal educators, learners, and the public to encourage participation in space-related research, education, and outreach programs across the state. Our research and engagement focuses on topics of aerospace, astronomy, space science, and much more! To expand, innovate and maximize our program's effectiveness, we embed the values of diversity, equity, inclusion, justice and accessibility (DEIJA) in our organizational expectations and daily operations.

CONTACT NC SPACE GRANT: 919.515.4240 ncspacegrant@ncsu.edu ncspacegrant.org



By the Numbers members of the higher education public participating students at 24 schools in outreach activities engaged in programs statewide of supported students educators received continue along STEM training with NASA academic and career content, reaching 2,777 K-12 students oathways

The James Webb Space Telescope produces highly detailed images of the first galaxies, solar systems, stars and all-things space. This image shows a universe of galaxies. COURTESY JAMES WEBB SPACE TELESCOPE, NASA.



Accessible Space Science

In 2022, NC Space Grant and Space Grant network partners brought together educators and NASA education specialists at the Innovative Differentiated Exploration Activities in Space Science (IDEAS) workshop. Sessions included six educators from across NC who field-tested activities and developed lesson modifications for students with special needs.

Individuals with disabilities have been underrepresented in STEM fields, despite advances in accessible technology. IDEAS is taking on this challenge to equip all students with rich STEM experiences and teachers with resources and tools.



Partnering with Community Colleges for STEM Innovation

NC Space Grant has a long-standing partnership with the North Carolina Community College System (NCCCS). Many community colleges statewide currently participate in our programs. The NC Community College Research Pathways and High Altitude Ballooning Challenge programs provide skills and competencies beyond typical classroom instruction — and build students' portfolios. Some students go on to 4-year institutions. Others complete their

A team of ECC students launch a high-altitude balloon. COURTESY ECC. programs and start careers at NASA and industry giants.

College partners also cite students' personal growth. "We have seen great improvement with students in their teamwork, communication, public speaking, confidence and problemsolving," notes Rebecca Stamilio-Ehret at Edgecombe Community College (ECC).

In 2023, our partnership is working to increase participation of diverse student populations that are historically excluded or underserved. The ultimate goal is to get even more students and colleges involved in STEM research and teamwork opportunities from NC Space Grant and NASA.

Alumni Lead the Way to Cutting-Edge Aerospace

ames Ainsworth, an NC Space Grant alum, comes full circle, from a student to a mentor in the cutting-edge aerospace industry. While a student at NC State University, he received an NC Space Grant undergraduate scholarship. He designed a crew capsule that considered reentry heating and aero-loads, research relevant to his work today.

In 2009, Ainsworth launched his aerospace career in Virginia. In 2021, Collier Aerospace – HyperX opened its Raleigh location, drawing upon the local talent pool to serve the growing aerospace industry in the state. He is equally serious about mentoring a new generation of students as he leads a summer internship program with NC Space Grant.

Seeding Support of WSSU Astrobotany Lab

Dr. Rafael Loureiro, head of the WSSU Astrobotany Lab, received an NC Space Grant research grant in 2018 that provided startup funding to early career faculty conducting NASA-aligned research. That funding helped establish the only astrobotany lab at a Historically Black College and University (HBCU) in the country! NC Space Grant continues to support the WSSU Astrobotany Lab as it grows, funding student researchers and NASA internships.

NC Governor Roy Cooper recognizes the important research completed by the WSSU Astrobotany Lab and students, not only for future space travel, but also for crop production right at home. "Innovative STEM programs like these are helping to strengthen and diversify our workforce, so our students can take on the jobs of the future," he said as part of a tour. "The astrobotany that is going on here at Winston-Salem State, I have no doubt will bring yield to people right here on Earth."



Working with NASA Kennedy Space Center's Food Production Lab, student biologists lead studies on plant growth and crop production in extraterrestrial soils. COURTESY DR. RAFAEL LOUREIRO.